Fachhochschule Jena
University of Applied Sciences Jena

Jenaer Schriftenreihe zur Unternehmensgründung

Professional Intentions of University Students: A Cross-Regional Comparison

Mário Franco, Heiko Haase and Arndt Lautenschläger

Nr. 13 / 2009

Arbeits- und Diskussionspapiere
des COE Centers of Entrepreneurship
in der FH Jena

ISSN 1860-9147

Herausgeber:

Fachhochschule Jena
Carl-Zeiss-Promenade 2
Postfach 10 03 14
07745 Jena

Schriftleitung:

Prof. Dr. Gabriele Beibst
gabriele.beibst@fh-jena.de

Dipl.-Volkswirt Arndt Lautenschläger
arndt.lautenschlaeger@fh-jena.de

Professional Intentions of University Students: A Cross-Regional Comparison

Mário Franco*, Heiko Haase and Arndt Lautenschläger*****

* University of Beira Interior
Estrada do Sineiro, 6200-209 Covilhã, Portugal
email: mfranco@ubi.pt, phone: +351 275 319636

** Worms University of Applied Sciences
Erenburgerstraße 19, 67549 Worms, Germany
email: haase@fh-worms.de, phone: +49 6241 509354

*** University of Applied Sciences Jena
Carl-Zeiss-Promenade 2, 07745 Jena, Germany
email: arndt.lautenschlaeger@fh-jena.de, phone: +49 3641 205591

Abstract

The paper explores the prospective career paths of 988 university students from Eastern and Western Germany as well as from Portugal. It also analyses a series of influential factors for occupational choice. The findings reveal that just a small fraction of students is disposed to start a firm, and the vast majority have not yet made a decision. The impact of gender, age, course of study and social background is rather mixed. We found some general motivations for future entrepreneurs, predominantly of a non-economic nature. Several implications are presented. We especially make an argument for target-group oriented entrepreneurship education, although its importance should not be overestimated.

Keywords

Professional intentions; entrepreneurial potential; student survey; universities; Germany; Portugal.

1. Introduction

In today's world, the formation of new firms is crucial for the vitality of national economies. Initialisation and support of new business ventures are important tasks for both policy makers and academics. Hereby, higher education institutions play a fundamental role. Besides their traditional teaching, they are challenged to endow their students actively with the appropriate motivation, knowledge and abilities for firm creation, often articulated as relevance or the third mission of universities (Gibb 1996; Johannisson et al. 1998; Etzkowitz et al. 2000). Nevertheless, only a small proportion of university students seem to be willing to step into self-employment.

Studies on students' entrepreneurial potential do not constitute a novelty; however, in Europe they mostly analyse the situation in German-speaking countries (Golla et al. 2006; Chlosta, Klandt, and Johann 2006; Josten et al. 2008; Lautenschläger and Haase 2008) or in the United Kingdom (Tackey and Perryman 1999; Greene and Saridakis 2008). To our knowledge, there is only one recent international comparison (Fueglistaller et al. 2006). Hereby, research is mainly focused on entrepreneurial potential, whereas overall professional intentions and underlying motivations are not sufficiently explored. Concerning the regional contexts where research has been carried out, the Portuguese academic environment is almost absent from scientific scrutiny.

Based on these premises, our central research question is: What are the professional intentions of university students in different European regions? Are there any specific influential factors and outstanding differences between subgroups? In order to tackle this issue, the present paper explores the prospective career paths of university students from Eastern and Western Germany as well as from Portugal. It uses a wide range of variables such as demographic profile, family background, motivations and participation in entrepreneurship education. In doing so, this cross-sectional study contributes to the growing body of literature explaining the career choices of university students and the role of entrepreneurship education and support at a cross-regional level.

The remainder of the paper is structured as follows: The next section presents theory and draws up our research hypotheses to be empirically tested later on. Following this, in section 3, we elucidate the methodology, i.e. data gathering, measurement and sample composition. Afterwards, section 4 shows the results of our survey and discusses the findings. The last section highlights the theoretical contributions, implications and limitations of our study.

2. Theory and research hypotheses

Scientific literature has extensively investigated socio-demographic attributes in career choice. With regard to gender differences, several studies underscore that men exhibit a stronger preference for self-employment than women (Grilo and Irigoyen 2006; Werner and Moog 2007) and that being male augments the probability of being self-employed (Blanchflower and Meyer 1994; Reynolds 1997; Lin et al. 2000; Blanchflower et al. 2001). For Germany, Caliendo et al. (2009) showed that men are more than twice as active as entrepreneurs as women. Another factor, the relation between age and rates of entry into self-employment, has also been analysed by several scholars. Evans and Leighton (1989), though not statistically significant, noticed a positive correlation at least during the first years after formal qualification. Holtz-Eakin and Rosen (2005) and Caliendo et al. (2009) empirically

confirm this observation for Germany. On the other hand, Reynolds (1997) revealed in his study that age and rate of entry were negatively correlated. Nevertheless, we think that older students have already developed a certain career 'entrepreneurial mindset' and are, therefore, more willing to step into self-employment. The course of study also appears to be influential. Interestingly, Tackey and Perryman (1999) found the highest self-employment rate in creative arts and design courses. This leads us to our first hypothesis, expressed here in its simplest form:

Hypothesis 1: *Students' gender, age and course of study are related to their professional intentions.*

Research about family background indicates a positive relationship between family models and the emergence of entrepreneurs. Several scholars have shown the influence of parents' professional activities on children's career decisions, as they often prefer to work in the same field as their parents (Duchesneau and Gartner 1990; Scherer et al. 1991). Hence, having an entrepreneurial family background points towards higher a likelihood of self-employment (Scott and Twomey 1988; Scherer et al. 1989; Tackey and Perryman 1999). More generally, receiving social support was proven to be crucial for entrepreneurial intentions and the decision to create a business (Boy and Vozikis 1994). In short, for our research contexts, we hypothesise the following:

Hypothesis 2: *Having entrepreneurs in the family or circle of friends is positively related to entrepreneurial intentions.*

Concerning entrepreneurs, much research about the reasons in different contexts and countries for starting a business has been done. Among the motives mostly cited, scholars found self-fulfilment (Gatewood et al. 1995; Kolvereid 1996; Carter et al. 2003), need of autonomy (Brockhaus 1980), social recognition and approval (Shane, Kolvereid, and Westhead 1991; Birley and Westhead 1994; Carter et al. 2003), as well as financial success and high income (Evans and Leighton 1989; Shane et al. 1991; Carter et al. 2003). Hereby, economic motivations are considered less important than other objectives (Baumol 1993); the predisposition towards entrepreneurship depends rather on psychological attributes (Robinson et al. 1991). Consequently, we assume:

Hypothesis 3: *The motives for students' occupational choice are related to their professional intentions.*

When exploring professional intentions, it also seems pertinent to conduct an analysis concerning the contribution of education to fomenting entrepreneurship. Entrepreneurship education is based on the argument that exposure to certain educational and entrepreneurship-related pedagogies can contribute to developing knowledge and skills which are favourable for the decision to become self-employed. Numerous scholars have discovered that exposure to entrepreneurship education significantly increases participants' entrepreneurial intentions (Cho 1998; Lüthje and Franke 2003; Zhao, Seibert and Hills 2005; Lee, Chang, and Lim 2005; Fayolle, Gailly, and Lassas-Clerc 2006; Pittaway and Cope 2007). Moreover, researchers found a positive impact on motivation (Clark et al. 1984), attitudes (Souitaris et al. 2007) and perceptions of both desirability and feasibility (Peterman and Kennedy 2003). In the light of that evidence, we formulate our last hypothesis:

Hypothesis 4: *The participation in entrepreneurship education is positively related to entrepreneurial intentions.*

3. Methodology

To empirically test the hypotheses, we carried out a cross-sectional study, aimed at surveying a population of undergraduate and graduate students at the University of Applied Sciences Jena (Germany), Worms University of Applied Sciences (Germany) and the University of Beira Interior in Covilhã (Portugal). The selection of these universities is due to the fact that they represent completely different cultural and economic situations – Eastern Germany, Western Germany and Central Portugal.

From November 2008 to February 2009, students were directly approached by the interviewers in a selected range of lectures and courses throughout the university locations, in order to ensure a weighted inclusion of students from all courses and years of study. The overall sample is composed of 988 students. This corresponds to almost 8% of the overall university population of the three higher education institutions surveyed. Besides business administration and economics, the participants' fields of study were other social sciences as well as arts and design, engineering and mathematics. For a more detailed characterisation of the sample, see Table 1.

Table 1: Sample characteristics

	Germany				*Portugal*	
	Eastern Germany		**Western Germany**		**Central Portugal**	
Characteristics	*N*	*%*	*N*	*%*	*N*	*%*
Gender						
Female	123	49.2	232	59.6	187	54.5
Male	127	50.8	157	40.4	156	45.5
Total	*250*	*100.0*	*389*	*100.0*	*343*	*100.0*
Age						
Under 21	19	7.7	12	3.2	94	27.2
21–23	118	47.8	140	37.0	151	43.8
24–26	69	27.9	154	40.7	64	18.6
Above 26	41	16.6	72	19.1	36	10.4
Total	*247*	*100.0*	*378*	*100.0*	*345*	*100.0*
Scientific area						
Business administration/economics	87	34.3	329	86.1	143	41.6
Other areas	167	65.7	53	13.9	201	58.4
Total	*254*	*100.0*	*382*	*100.0*	*344*	*100.0*
Overall student population	4.900		2.700		4.900	

The questionnaire encompassed various groups of questions related to the respondents' profile, demographic characteristics, motives for professional choice, participation in entrepreneurship-related courses as well as professional and entrepreneurial intentions. The research was based on a prospective basis, i.e. we asked students before their decisions would be fulfilled. We used the following types of variables for our statistical analysis:

Dependent variables: Professional and entrepreneurial intentions were measured based on the alternatives (1) Non-founders ("I don't want to be self-employed."), (2) Potential founders ("I don't exclude the possibility of being self-employed.") and (3) Founders ("I intend to be self-employed.", "I have already initiated activities to become self-employed." or "I am already self-employed.").

Independent variables: Demographic profile was measured through gender, age and course of study. Family background was assessed with the existence of entrepreneurs in the family or with having entrepreneurs as friends. Motivation dimensions included a number of individual motives for occupational choice, gathered by five-point Likert-type scales. Entrepreneurship education was conceptualised through participation in several types of entrepreneurship-related subjects offered at the universities surveyed.

Control variables: We checked the data from the three university locations.

For data analysis, we employed Spearman's rank correlation coefficient to test for significant relationships among the different variables.

4. Findings and discussion

Table 2 indicates the respondents' professional and entrepreneurial intentions. As shown, the share of students willing to be self-employed is lowest in the Eastern German university (8.3%), followed by the Western German institution (14.3%), whereas in Portugal the respective share is considerably higher (23.1%). For Germany, this is in line with Chlosta's et al. (2006) and Josten's et al. (2008) studies, although the entrepreneurial intentions within Worms University are situated slightly over the German average.

Table 2: Professional intentions

Intentions	**Non-founder**	**Potential founder**	**Founder**	***Total***
Eastern Germany				
N	63	170	21	*254*
%	24.8	66.9	8.3	*100.0*
Western Germany				
N	82	253	56	*391*
%	21.0	64.7	14.3	*100.0*
Central Portugal				
N	24	243	80	*347*
%	6.9	70.0	23.1	*100.0*

When performing the explorative data analysis, we found partial support for our Hypothesis 1. In accordance with Table 3, at both German universities we found more female students among those who do not want to be self-employed. Again for East Germany, we revealed that students willing to start-up a business tend to be older. These insights are in line with mainstream literature as illustrated in Section 2. Additionally, at this university, entrepreneurially-oriented students can be more frequently identified within business administration and economics.

Table 3: Gender, age and course of study with professional intentions

	Non-founder	Potential founder	Founder
Eastern Germany			
Gender (1=female, 2=male)	-0.1574*	0.1217	0.0384
Age	0.0347	-0.1324*	0.1702**
Business administration/economics	-0.1264*	-0.0217	0.2352**
Western Germany			
Gender	-0.1638**	0.1129	0.0358
Age	0.0173	0.0201	-0.0473
Business administration/economics	0.0172	0.0310	-0.0624
Central Portugal			
Gender	-0.0440	-0.0344	0.0639
Age	-0.0136	-0.0471	0.0596
Business administration/economics	-0.0025	-0.0785	0.0838

Notes: *p<0.05, **p<0.01.

Interestingly, despite a number of existing investigations demonstrating a connection between social background and entrepreneurial propensity, for our sample this relation is rather weak. As shown in Table 4, having self-employed parents is positively related to entrepreneurial intention at the Western German higher education institution, while at the Eastern German university we found a similar relationship only for having self-employed friends. Thus, the outcomes are mixed, leading to partial rejection of Hypothesis 2.

Table 4: Family with professional intentions

	Non-founder	Potential founder	Founder
Eastern Germany			
Self-employed parents	0.0727	-0.1088	0.0718
Self-employed within family	-0.0460	0.0730	-0.0527
Self-employed friends	-0.1473*	0.0567	0.1340*
Western Germany			
Self-employed parents	-0.0515	-0.0322	0.1037*
Self-employed within family	-0.0542	-0.0264	0.0991
Self-employed friends	-0.0944	0.0826	-0.0030
Central Portugal			
Self-employed parents	-0.0312	-0.0328	0.0544
Self-employed within family	0.0070	-0.0846	0.0878
Self-employed friends	-0.0244	0.0334	-0.0216

Notes: *p<0.05, **p<0.01.

Regarding Hypothesis 3, in which we supposed an association of motives for occupational choice and the emergence of entrepreneurship, there is statistical support. Table 5 highlights that particular motivations such as “Being my own boss” and “Carrying out my business/product ideas” are extremely significant for the self-employment decision at all university locations surveyed. The same applies to “Continuing the family tradition”, so that we do see an overwhelmingly significant ‘family effect’, as opposed to the findings concerning our Hypothesis 2.

Table 5: Motives for professional intentions

	Non-founder	Potential founder	Founder
Eastern Germany			
Working on my own initiative	-0.0656	0.0604	0.0001
Self-deciding about working hours and place	-0.0667	-0.0093	0.1231
Making better use of my own capabilities	-0.0115	0.0672	-0.0985
Being my own boss	-0.3284**	0.1730**	0.2256**
Carrying out my business/product ideas	-0.1298*	0.0410	0.1368*
The chance of higher income	-0.0168	-0.0486	0.1116
The current situation in the labour market	0.0107	0.0329	-0.0746
Fun when dealing with opportunities and risks	-0.0830	0.0871	-0.0185
Prestige and social status	-0.0265	-0.0015	0.0451
Continuing the family tradition	-0.0698	-0.0254	0.1564*
Western Germany			
Working on my own initiative	-0.0637	-0.0205	0.1042
Self-deciding about working hours and place	0.0056	-0.0486	0.0609
Making better use of my own capabilities	0.0170	-0.0495	0.0479
Being my own boss	-0.2006**	0.0265	0.2010**
Carrying out my business/product ideas	-0.0437	-0.1014	0.1927**
The chance of higher income	-0.0221	-0.0742	0.1294*
The current situation in the labour market	0.0396	-0.0534	0.0272
Fun when dealing with opportunities and risks	-0.0334	-0.0636	0.1281*
Prestige and social status	0.0533	-0.1077*	0.0865
Continuing the family tradition	-0.0584	-0.0500	0.1389*
Central Portugal			
Working on my own initiative	-0.1341*	-0.2163**	0.3181**
Self-deciding about working hours and place	-0.0553	-0.1072*	0.1508**
Making better use of my own capabilities	0.0233	-0.0675	0.0594
Being my own boss	-0.1526**	-0.2010**	0.3128**
Carrying out my business/product ideas	-0.0735	-0.2161**	0.2808**
The chance of higher income	0.0291	-0.0540	0.0410
The current situation in the labour market	0.0534	-0.0194	-0.0116
Fun when dealing with opportunities and risks	-0.0074	-0.0808	0.0927
Prestige and social status	0.0415	-0.1267*	0.1128*
Continuing the family tradition	-0.0533	-0.0704	0.1094*

Notes: *p<0.05, **p<0.01, 1 = strongly disagree … 5 = strongly agree.

Our last issue addresses the link between entrepreneurship education and entrepreneurial intentions. As shown by Table 6, we could only prove a very weak correlation between participation in entrepreneurship education and entrepreneurial intentions. In addition, there is no homogeneous picture when comparing the different higher education intuitions. Only participation in seminars on business plan development appears to be robustly correlated with students' entrepreneurial propensity, at least at the Eastern German and Portuguese universities. Nonetheless, the overall results are contrary to our Hypothesis 4.

Table 6: Entrepreneurship education and professional intentions

	Non-founder	Potential founder	Founder
Eastern Germany			
Field reports from entrepreneurs	-0.0731	0.0591	0.0137
Case studies about newly established firms	-0.0967	0.0161	0.1241*
Training in creativity and problem solving	-0.0673	0.0637	-0.0032
Business plan development	-0.0608	-0.0916	0.2518**
Training in social competencies	0.0730	-0.0330	-0.0581
Business start-up simulations	-0.0774	0.0673	0.0064
Lectures on entrepreneurship	-0.0279	-0.0369	0.1067
Western Germany			
Field reports from entrepreneurs	0.0959	-0.1028*	0.0288
Case studies about newly established firms	0.0525	-0.0528	0.0111
Training in creativity and problem solving	-0.0503	0.0477	-0.0066
Business plan development	0.0818	-0.0402	-0.0402
Training in social competencies	0.0518	-0.0454	0.0017
Business start-up simulations	0.0052	-0.0538	0.0674
Lectures on entrepreneurship	0.0018	0.0056	-0.0096
Central Portugal			
Field reports from entrepreneurs	-0.0065	-0.0620	0.0714
Case studies about newly established firms	0.0965	-0.1080*	0.0593
Training in creativity and problem solving	-0.0301	-0.0191	0.0389
Business plan development	-0.0111	-0.1438**	0.1631**
Training in social competencies	0.0939	0.0275	-0.0865
Business start-up simulations	0.0085	-0.0891	0.0918
Lectures on entrepreneurship	-0.0078	-0.0611	0.0711

Notes: *p<0.05, **p<0.01.

5. Contributions and implications

According to the literature, our findings corrobate that just a small fraction of students is disposed to start their own firm. On the contrary, the vast majority have not yet made the decision to step into self-employment though do not discard this option. When analysing for influential factors, we found a rather mixed situation among the higher education institutions surveyed. This applies especially to the impact of gender, age, course of study and social background. This signals the fact that cultural and academic environments matter when it comes to comparing the three universities.

In contrast, with regard to the underlying motives for occupational choice, opinions related to self-fulfilment (Gatewood et al. 1995; Kolvereid 1996; Carter et al. 2003) and the need of autonomy (Brockhaus 1980) were proved to be important at all university locations surveyed. In this context, non-economic motivations predominated, which underpins Baumol's (1993) argument. Although for our sample the direct ‘family effect’ on entrepreneurial intentions was weak, continuing the family tradition was more frequently mentioned among entrepreneurially-inclined respondents. This allows the conclusion that a certain family influence on the emergence of entrepreneurship cannot be neglected.

In the light of these findings, the central question arises: What can be the role of universities in fostering entrepreneurship? On the one hand, the vast majority of students were identified as potential founders, so that policy makers and academics are challenged to offer adequate

programmes and initiatives for promoting entrepreneurship among this subgroup. Entrepreneurship education should not only distinguish founders from potential founders as different target groups, but also consider gender, age and course-specific measures. Interestingly, to a certain extent, business administration and economics students in our sample are those with highest self-employment propensity, much more than their counterparts in engineering or natural sciences.

On the other hand, the proportion of students strongly-willed to create a business is highest in Portugal, but relatively small in Germany, especially in the Eastern part. This fact again reflects the diverging socio-economic realities among the three university locations surveyed but also gives rise to the assumption that the educational system is partly responsible for the fact that many students prefer dependent employment. University education often aims at developing elite groups, people who one day will manage large multinational companies. It is still oriented more towards employment in well-known established companies, and the needs of regional industry are often unattended.

Nevertheless, and as a key implication of our research, we warn that the importance of entrepreneurship education should not be overestimated when universities intend to fulfil their mission in fostering entrepreneurship. Our results reveal that in our sample founders and potential founders have not consistently participated more in entrepreneurship-related courses, which does not really speak up for the significance of entrepreneurship education. Although their benefits are recited like a mantra, the conviction of positive outcomes often seems more ideologically than empirically grounded, as Peterman and Kennedy (2003) have rightly warned. In our view, entrepreneurship education, at best, can exert a supporting function, acting upon motivations rather than imparting knowledge. As we were able to demonstrate the relevance of especially non-economic motives for future entrepreneurs, entrepreneurship education should primarily focus on motivation-building components.

Finally, the present study has several limitations that offer possibilities for future research. Firstly, data from only three universities have been analysed. A simple generalisation may not be likely since idiosyncratic characteristics such as cultural aspects and mentality, industry structure, income level, economic climate, and so on, determine professional choice. For this reason, we suggest further research to detect regional differences. Secondly, we asked the students about their professional intentions in some cases years before their occupational choices will be made. According to their actual career path and subsequent experiences, their perception may alter in the future. Longitudinal studies over several years could compensate for this restriction. Nevertheless, we hope the findings of our study will inspire other scholars, and the combination of this and future work will surely allow valuable comparisons and insights.

References

Baumol, William J. 1993. “Toward operational models of entrepreneurship.” pp. 29-48 in *Ronen, J. (Ed.), Entrepreneurship*. Lexington (MA): Lexington Books.

Birley, Sue, and Paul Westhead. 1994. “A taxonomy of business start-up reasons and their impact on firm growth and size.” *Journal of Business Venturing* 9:7-31.

Blanchflower, David G., and Bruce D. Meyer. 1994. “A Longitudinal Analysis of the Young Self-Employed in Australia and the United States.” *Small Business Economics* 6:1-19.

Blanchflower, David G., Andrew Oswald, and Alois Stutzer. 2001. “Latent entrepreneurship across nations.” *European Economic Review* 45:680-691.

Boy, Nancy G., and George S. Vozikis. 1994. “The influence of self-efficacy on the development of entrepreneurial intentions and actions.” *Entrepreneurship Theory and Practice* 18:63-77.

Brockhaus, Robert H. 1980. “Risk Taking Propensity of Entrepreneurs.” *The Academy of Management Journal* 23:509-520.

Caliendo, Marco, Frank M. Fossen, and Alexander S. Kritikos. 2009. “Risk Attitudes of Nascent Entrepreneurs: New Evidence from an Experimentally-Validated Survey.” *Small Business Economics* 32:153-167.

Carter, Nancy M., William B. Gartner, Kelly G. Shaver, and Elizabeth J. Gatewood. 2003. “The career reasons of nascent entrepreneurs.” *Journal of Business Venturing* 18:13-39.

Chlosta, Simone, Heinz Klandt, and Tobias Johann. 2006. *German Survey on Collegiate Entrepreneurship. Gründungsneigung deutscher Studierender*. Oestrich-Winkel: European Business School (ebs).

Cho, B. 1998. “Study of the effective entrepreneurship education method and its process.” *Business Education Research* 2:27-47.

Clark, Brian W., Charles H. Davis, and Verne C. Harnish. 1984. “Do courses in entrepreneurship aid in new venture creation?.” *Journal of Small Business Management* 22:26–31.

Duchesneau, Donald A., and William B. Gartner. 1990. “A profile of new venture success and failure in an emerging industry.” *Journal of Business Venturing* 5:297-312.

Etzkowitz, Henry, Andrew Webster, Christiane Gebhardt, and Branca Regina Cantisano Terra. 2000. “The future of the university and the university of the future: evolution of ivory tower to entrepreneurial paradigm.” *Research Policy* 29:313-330.

Evans, David S., and Linda S. Leighton. 1989. “Some Empirical Aspects of Entrepreneurship.” *The American Economic Review* 79:519-535.

Fayolle, Alain, Benoît Gailly, and Narjisse Lassas-Clerc. 2006. “Assessing the impact of entrepreneurship education programmes: a new methodology.” *Journal of European Industrial Training* 30:701 - 720.

Fueglistaller, Urs, Heinz Klandt, and Frank Halter. 2006. *International Survey on Collegiate Entrepreneurship 2006*. St. Gallen/Oestrich-Winkel: University of St. Gallen (HSG) / European Business School (ebs).

Gatewood, Elizabeth J., Kelly G. Shaver, and William B. Gartner. 1995. "A longitudinal study of cognitive factors influencing start-up behaviors and success at venture creation." *Journal of Business Venturing* 10:371-391.

Gibb, Allan A. 1996. "Entrepreneurship and Small Business Management: Can We Afford to Neglect Them in the Twenty-First Century Business School?." *British Journal of Management* 7:309-321.

Golla, Stephan, Frank Halter, Urs Fueglistaller, and Heinz Klandt. 2006. "Gründungsneigung Studierender — Eine empirische Analyse in Deutschland und der Schweiz." Pp. 209-237 in *Achleitner, Ann-Kristin; Klandt, Heinz; Koch, Lambert T.; Voigt, Kai-Ingo (Hrsg.), Jahrbuch Entrepreneurship 2005/06. Gründungsforschung und Gründungsmanagement*. Berlin/Heidelberg: Springer.

Greene, Francis J., and George Saridakis. 2008. "The Role of Higher Education Skills and Support in Graduate Self-Employment." *Studies in Higher Education* 33:653-672.

Grilo, Isabel, and Jesus-Maria Irigoyen. 2006. "Entrepreneurship in the EU: To Wish and not to be." *Small Business Economics* 26:305-318.

Holtz-Eakin, Douglas, and Harvey Rosen. 2005. "Cash Constraints and Business Start-ups: Deutschmarks versus Dollars." *Contributions to Economic Analysis & Policy* 4:1-26.

Johannisson, Bengt, Hans Handström, and Jessica Rosenberg. 1998. "University training for entrepreneurship: an action frame of reference." *European Journal of Engineering Education* 23:477-496.

Josten, Martina, Marco van Elkan, Judith Laux, and Michael Thomm. 2008. *Gründungspotenziale bei Studierenden. Zentrale Ergebnisse der Studierendenbefragung an 37 deutschen Hochschulen*. Bonn/Berlin: Bundesministerium für Bildung und Forschung (Hrsg.).

Kolvereid, Lars. 1996. "Organizational employment versus self-employment: reasons for career choice intentions." *Entrepreneurship Theory and Practice* 20:23-31.

Lautenschläger, Arndt, and Heiko Haase. 2008. *Die Berufsabsichten Studierender: Erkenntnisse aus der Thüringer Studierenden Befragung 2007*. Jena: Fachhochschule Jena.

Lee, Sang M., Daesung Chang, and Seong-bae Lim. 2005. "Impact of Entrepreneurship Education: A Comparative Study of the U.S. and Korea." *The International Entrepreneurship and Management Journal* 1:27-43.

Lin, Zhengxi, Garnett Picot, and Janice Compton. 2000. "The Entry and Exit Dynamics of Self-Employment in Canada." *Small Business Economics* 15:105-125.

Lüthje, Christian, and Nikolaus Franke. 2003. "The 'making' of an Entrepreneur: Testing a model of entrepreneurial intent among engineering students at MIT." *R&D Management* 33:135-147.

Peterman, Nicole E., and Jessica Kennedy. 2003. “Enterprise Education: Influencing Students' Perceptions of Entrepreneurship.” *Entrepreneurship Theory and Practice* 28:129-144.

Pittaway, Luke, and Jason Cope. 2007. “Entrepreneurship Education: A Systematic Review of the Evidence.” *International Small Business Journal* 25:479-510.

Reynolds, Paul D. 1997. “Who Starts New Firms? – Preliminary Explorations of Firms-in-Gestation.” *Small Business Economics* 9:449-462.

Robinson, Peter B., D. V. Stimpson, J. C. Huefner, and H. K. Hunt. 1991. “An attitude approach to the prediction of entrepreneurship.” *Entrepreneurship Theory and Practice* 15:13-31.

Scherer, R. F., J. S. Adams, S. S. Carley, and F. A. Wiebe. 1989. “Role Model Performance Effects on the Development of Entrepreneurial Career Preference.” *Entrepreneurship Theory and Practice* 13:53-71.

Scherer, R. F., J. D. Brodzinski, and F. A. Wiebe. 1991. “Examining the relationship between personality and entrepreneurial career preference.” *Entrepreneurship and Regional Development* 3:195-206.

Scott, Michael G., and Daniel F. Twomey. 1988. “The long-term supply of entrepreneurs: students' career aspirations in relation to entrepreneurship.” *Journal of Small Business Management* 26:5-13.

Shane, Scott, Lars Kolvereid, and Paul Westhead. 1991. “An exploratory examination of the reasons leading to new firm formation across country and gender.” *Journal of Business Venturing* 6:431-446.

Souitaris, Vangelis, Stefania Zerbinati, and Andreas Al-Laham. 2007. “Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources.” *Journal of Business Venturing* 22:566-591.

Tackey, N. D., and S. Perryman. 1999. *Graduates Mean Business: A Study of Graduate Self-Employment and Business Start-Ups*. Grantham (UK): Grantham Book Services Ltd.

Werner, Arndt, and Petra Moog. 2007. “Arbeitsbedingungen in KMU und ihr Einfluss auf die Neigung zur Selbstständigkeit: Eine empirische und theoretische Untersuchung auf Basis des Humankapitalansatzes.” *Zeitschrift für Betriebswirtschaft* 6:75-97.

Zhao, Hao, Scott E. Seibert, and Gerald E. Hills. 2005. “The Mediating Role of Self-Efficacy in the Development of Entrepreneurial Intentions.” *Journal of Applied Psychology* 90:1265-1272.

Bisherige Veröffentlichungen der Jenaer Schriftenreihe zur Unternehmensgründung

Nr. 1 / 2005
Beibst, G. / Lautenschläger, A.
Die Bedeutung öffentlicher Wissenschaftseinrichtungen für eine innovationsorientierte Regionalpolitik

Nr. 2 / 2005
Beibst, G. / Lautenschläger, A.
Hochschulwissenschaftler als Unternehmensgründer: Gründungsabsichten und Gründerfähigkeiten von Hochschulwissenschaftlern im internationalen Vergleich

Nr. 3 / 2005
Beibst, G. / Naumann, A. / Lautenschläger, A.
Regionenmarketingkonzept für die GET UP Initiative

Nr. 4 / 2005
Beibst, G. / Lautenschläger, A./ Haase, H.
The Thuringian Model of Business Incubation: The GET UP – initiative and its quest for internationalization

Nr. 5 / 2005
Beibst, G. / Lautenschläger, A./ Haase, H.
The Internationalization of Thuringian Start-up Companies in High-Technology Industries

Nr. 6 / 2005
Beibst, G. / Lautenschläger, A.
Die Gründerausbildung für BWLer und Nicht-BWLer: Ein Erfahrungsbericht der FH Jena

Nr. 7 / 2005
Haase, H. / Lautenschläger, A. / Weyand, J. / Beibst, G.
Erfindungen, Patente und Verwertung: Eine empirische Untersuchung an Thüringer Hochschulen

Nr. 8 / 2006
Haase, H. / Lautenschläger, A.
Gründungsförderung an Thüringer Hochschulen: Zur Erfolgsanalyse des GET UP - Gründernetzwerkes

Nr. 9 / 2006
Beibst, G. / Lautenschläger, A.
Anforderungen und konzeptionelle Überlegungen für ein Gründer-Ausbildungsprogramm am Campus Jena

Nr. 10 / 2006
Haase, H.
Auf dem Weg zur unternehmerischen Universität? Ausgründungen aus der TU Ilmenau im Zeitraum von 1990 bis 2005

Nr. 11 / 2008
Lautenschläger, A. / Haase, H.
Die Berufsabsichten Studierender: Erkenntnisse aus der Thüringer Studierenden Befragung 2007

Nr. 12 / 2009
Lautenschläger, A. / Haase, H.
Die Gründerausbildung an Thüringer Hochschulen: Eine Analyse von Einflussfaktoren auf das Interesse an gründungsrelevanten Lehrveranstaltungen

Nr. 13 / 2009
Franco, M. / Haase, H. / Lautenschläger, A.
Professional intentions of university students: A cross-regional comparison

Alle Veröffentlichungen sind auch in der Digitalen Bibliothek Thüringen kostenfrei abrufbar unter:

http://www.db-thueringen.de